

## I. AMENDMENTS

### In the Claims:

Please cancel, without prejudice or disclaimer, claims 35 to 46. Please amend claims 47, 48 and 55 to 59, as shown below by deleting the stricken-through material and inserting the underlined material as follows:

Claims 35 – 46 (Canceled).

47. (Currently Amended) A method for ~~determining the suitability of treating a cancer in a subject using a chemotherapeutic drug, the method screening cancer cells for sensitivity to a chemotherapeutic drug~~, comprising:

    taking a biological sample of said cancer cells from a the subject; and  
    using the biological sample to determine determining the genotype of a pre-selected gene of the cancer cells subject, wherein said genotype determines the intratumoral expression of said gene, and correlating wherein said gene expression determines the response of the subject to said sensitivity to said chemotherapeutic drug.

48. (Currently Amended) The method of claim 47 wherein the said cancer cells are is colorectal cancer cells.

49. (Currently Amended) The method of claim 48 wherein the said pre-selected gene is thymidylate synthase gene.

50. (Previously Added) The method of claim 49 wherein determining the genotype comprises determining the subject's genotype at a tandemly repeated 28 base pair sequence in the thymidylate synthase (TS) gene's 5' untranslated region (UTR), wherein the genotype is homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence.

51. (Previously Added) The method of claim 50 wherein the chemotherapeutic drug is a TS directed drug.

52. (Previously Added) The method of claim 51 wherein the TS directed drug is a

fluopyrimidine.

53. (Previously Added) The method of claim 52 wherein the fluoropyrimidine is 5-fluorouracil.

54. (Previously Added) The method of claim 53 wherein the subject is a human subject.

55. (Currently Amended) The method of claim 54 wherein determining the subject's genotype ~~further~~ comprises:

~~extracting genomic DNA from a biological sample of the subject;~~

~~amplifying the determining the genotype at the 5' UTR of the thymidylate synthase gene of said genomic DNA from said cell using polymerase chain reaction; and~~

~~analyzing the polymerase chain reaction product to determine the subject's genotype.~~

56. (Currently Amended) The method of claim 55 wherein ~~said determining the genotype is by analysis of the polymerase chain reaction product of the 5'UTR is performed using electrophoresis.~~

57. (Currently Amended) A kit for use in screening for the effectiveness of TS directed drug therapy in human subjects, the kit comprising: means for determining a genomic polymorphism of the 5'UTR of the TS gene; and instructions for correlating the genomic polymorphism of the 5' UTR of the TS gene to sensitivity to TS directed drug therapy use of the kit.

58. (Currently Amended) The kit of claim 57 wherein the means for determining said genomic polymorphism ~~comprise~~ all or some of the positive controls, negative controls, reagents, primers, sequencing markers, and probes for determining the presence or absence of a tandemly repeated 28 base-pair nucleic acid sequence that defines the genomic polymorphism in the 5' UTR of the TS gene.

59. (Currently Amended) The kit of claim 58 wherein the kit components may be provided in solution or as a liquid dispersion ~~or the like~~.

60. (Previously Added) The kit of claim 58 comprising DNA tandemly repeated

sequences that determine the type of genomic polymorphism of the TS gene in Tris-EDTA buffer solution kept at about 4°C.